

CCA GCA ACC AAT GAT GCC CGT T-TAMRA-3'  
 CA GCA ACC AAT GAT GCC CGT T-TAMRA-3'

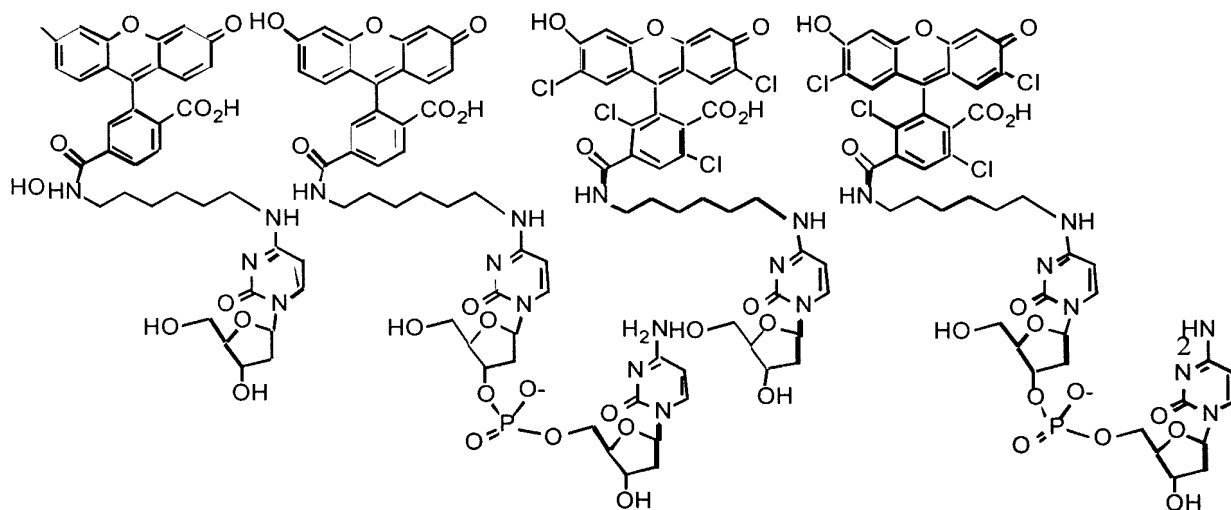
CCA GCA AGC ACT GAT GCC TGT T-TAMRA-3'  
 CA GCA AGC ACT GAT GCC TGT T-TAMRA-3'

**Fig. 1A**

Fluorescent Dyes		
	<u>Absorbance Maxima</u>	<u>Emission Maxima</u>
Fluorescein	494nm	525nm
Tetrachloro fluorescein	521nm	536nm
TAMRA	565nm	580nm

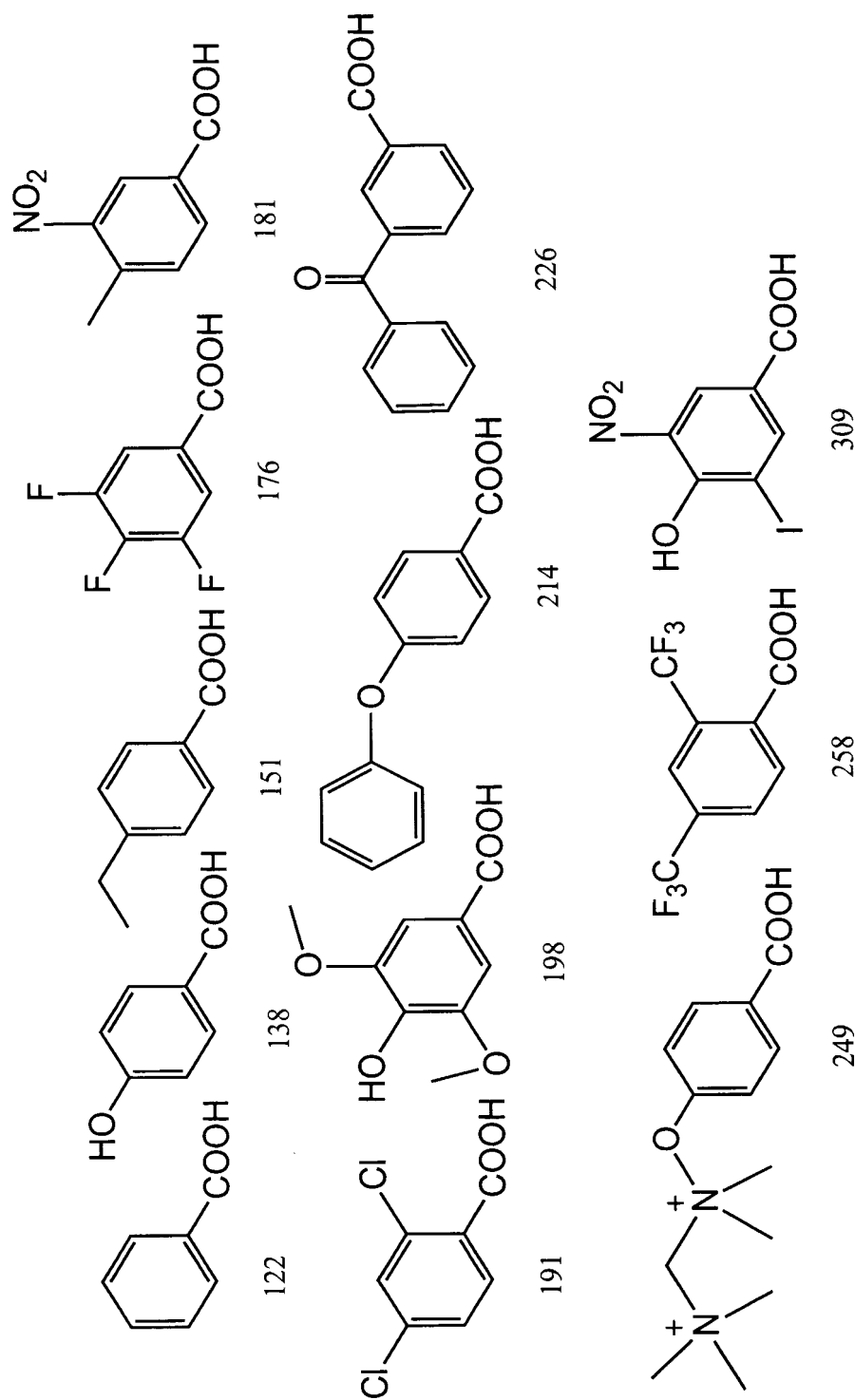
**Fig. 1B**

Cleaved Fragments:

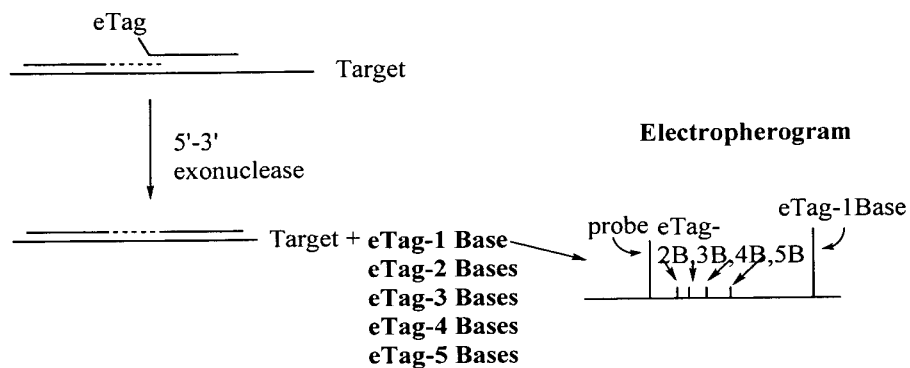


**Fig. 1C**

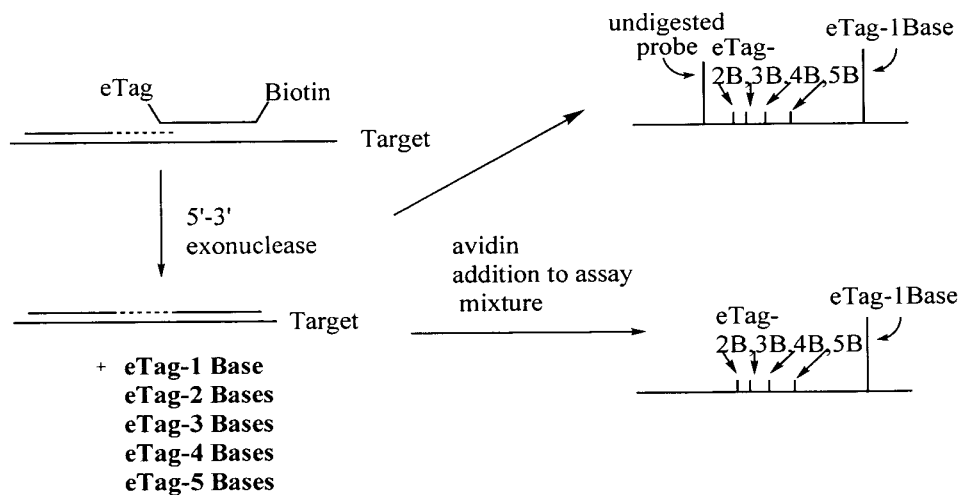
122 138 151 176 181 191 214 226 249 258 309



**Fig. 2**



**Fig. 3A**



**Fig. 3B**

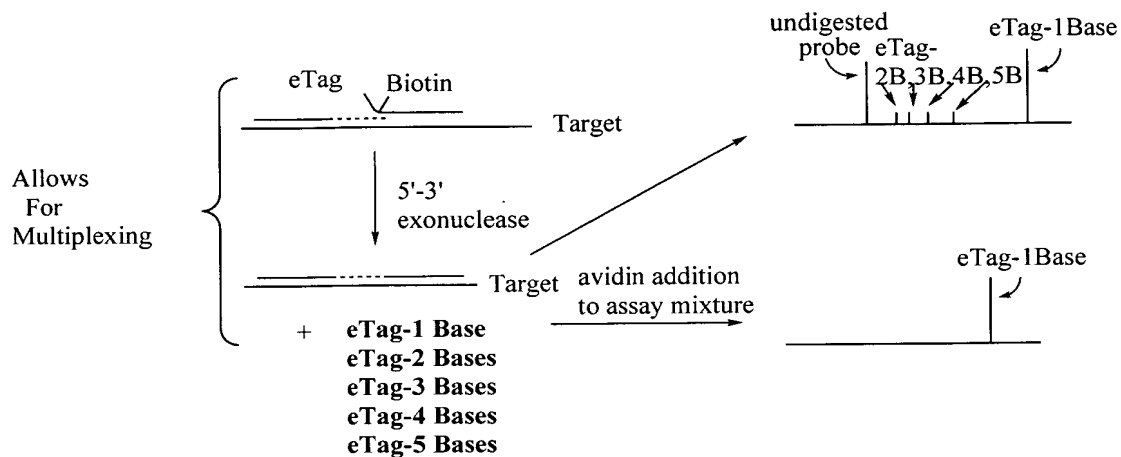


Fig. 3C

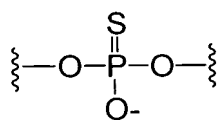
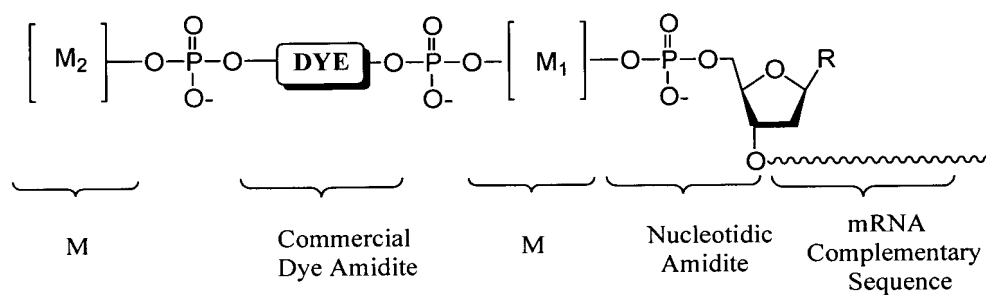
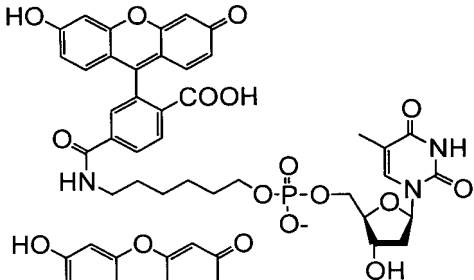
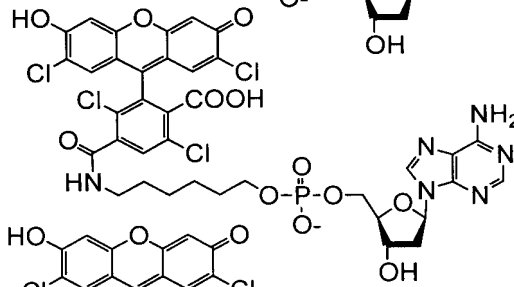
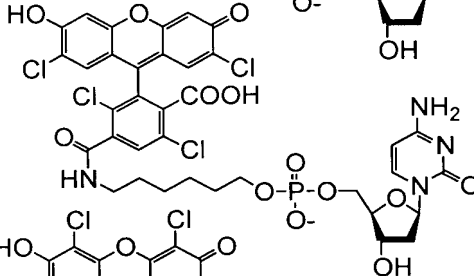
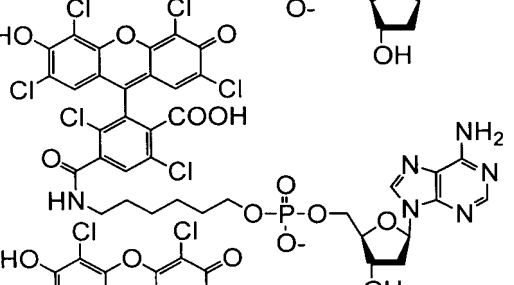
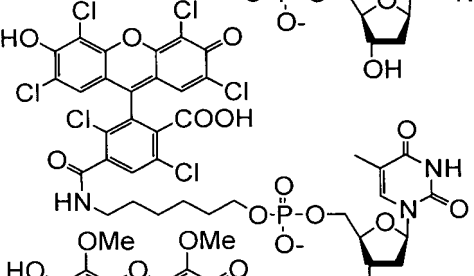
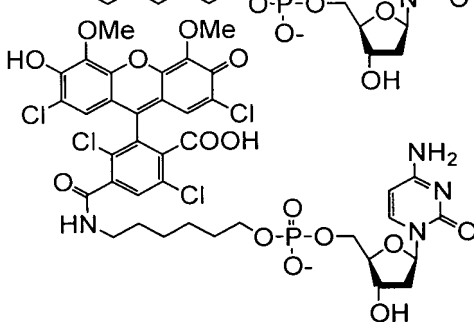


Fig. 3D



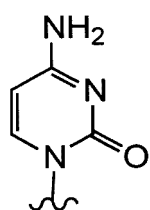
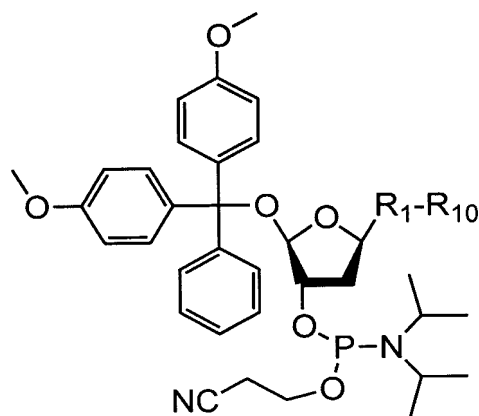
**Fig. 4**

<u>e-tag Reporter</u>	<u>Elution Time on CE, min</u>	<u>Mass</u>
	6.4	778
	7.1	925
	7.3	901
	7.7	994
	8.0	985
	9.25	961

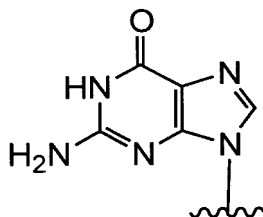
**Fig. 5**

e-tag Reporter	Charge	Elution Time, min
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3 \text{C}_3 \text{C}_3 \text{C}_3 \text{C}_3 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-8	12.1*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-9	12.7
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-8	12.8
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6 \text{C}_6 \text{C}_6 \text{C}_6 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-7	13.1
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3 \text{C}_3 \text{C}_9 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-6	13.0
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6 \text{C}_6 \text{C}_6 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-6	13.4
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3 \text{C}_3 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-5	12.8*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3 \text{C}_9 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-5	13.2*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_9 \text{C}_9 \text{---} \text{dC} \\ \parallel \\ \text{O}^- \end{array}$	-5	14.8
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{TTTdC} \\ \parallel \\ \text{O}^- \end{array}$	-6	17.3
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{TTdC} \\ \parallel \\ \text{O}^- \end{array}$	-5	17.0
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_9 \text{---} \text{dT} \\ \parallel \\ \text{O}^- \end{array}$	-4	15.2*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{C}_5 \text{---} \text{O} \text{---} \text{P} \text{---} \text{O} \text{---} \text{TdC} \\ \parallel \\ \text{O}^- \end{array}$	-4	16.5

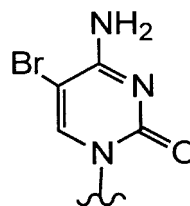
Fig. 6



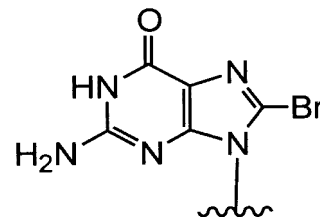
227



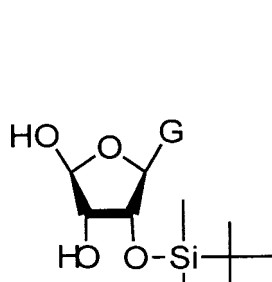
267



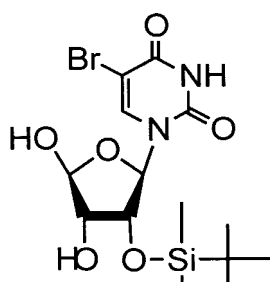
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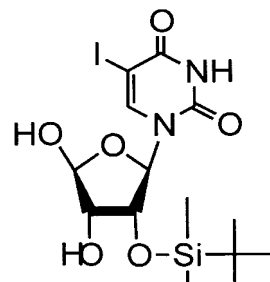
346



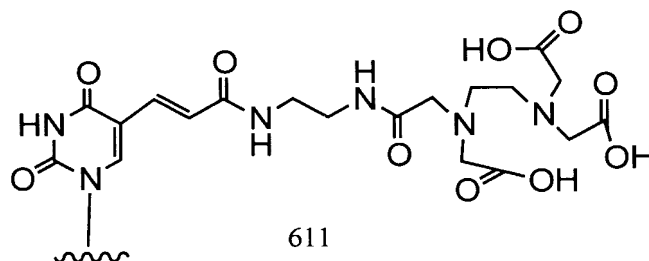
396



436



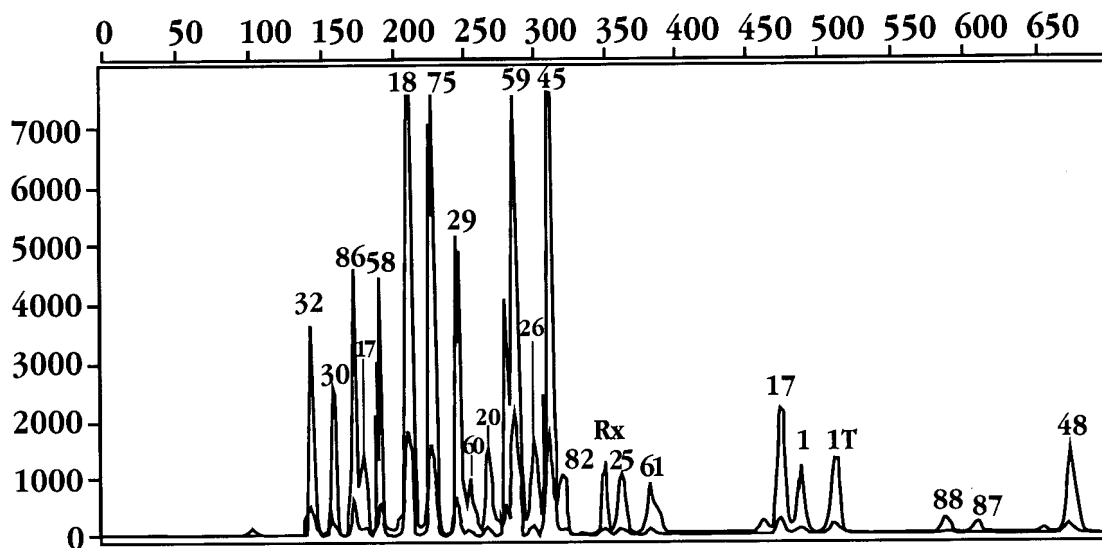
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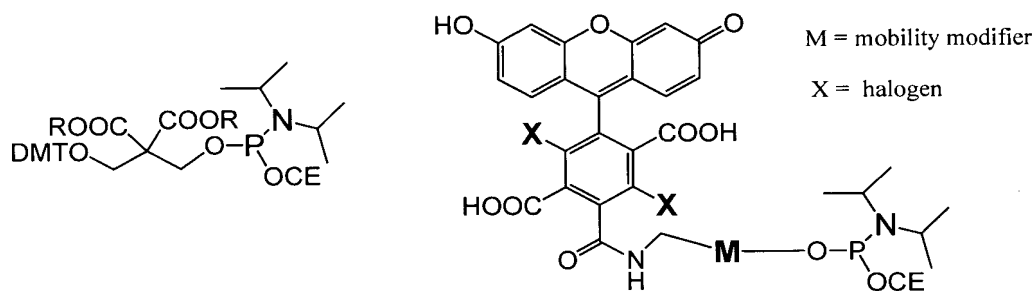
611

**Fig. 7**

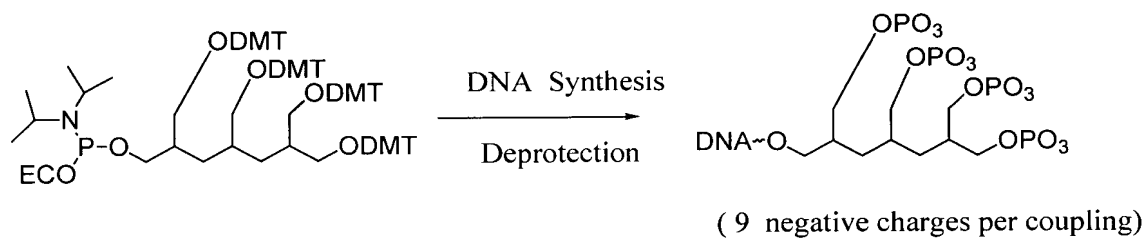




**Fig. 8**



**Fig. 9**



**Fig. 10**

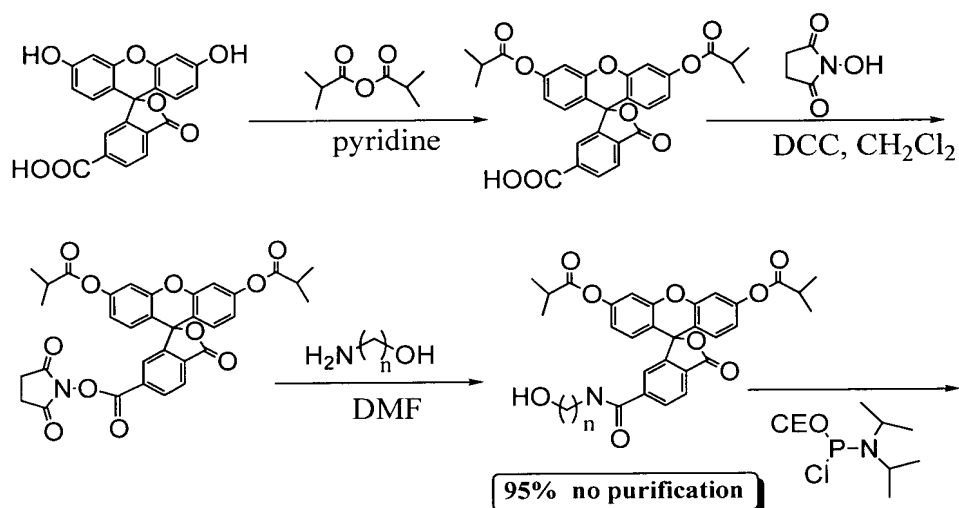


Fig. 11

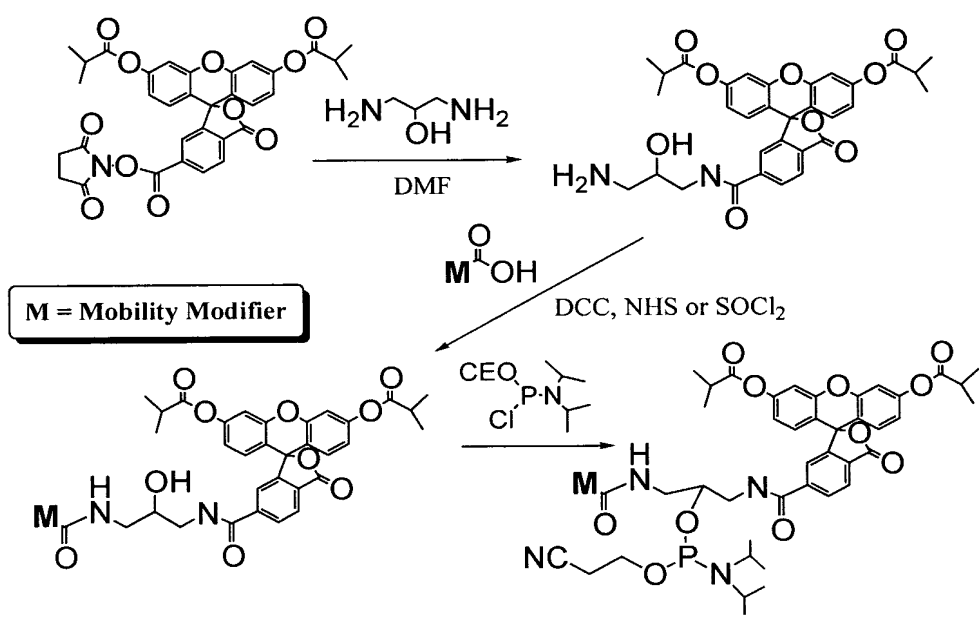


Fig. 12

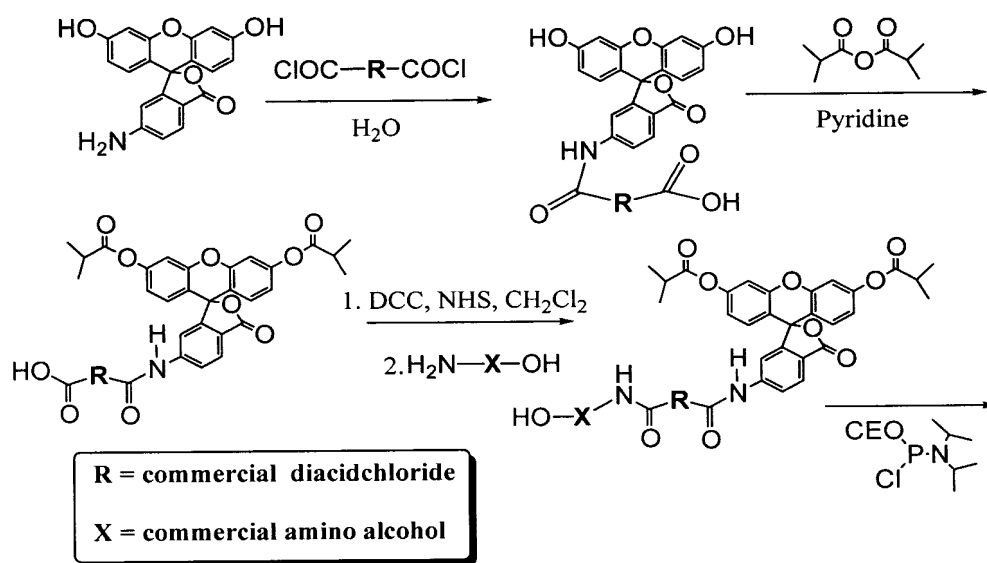
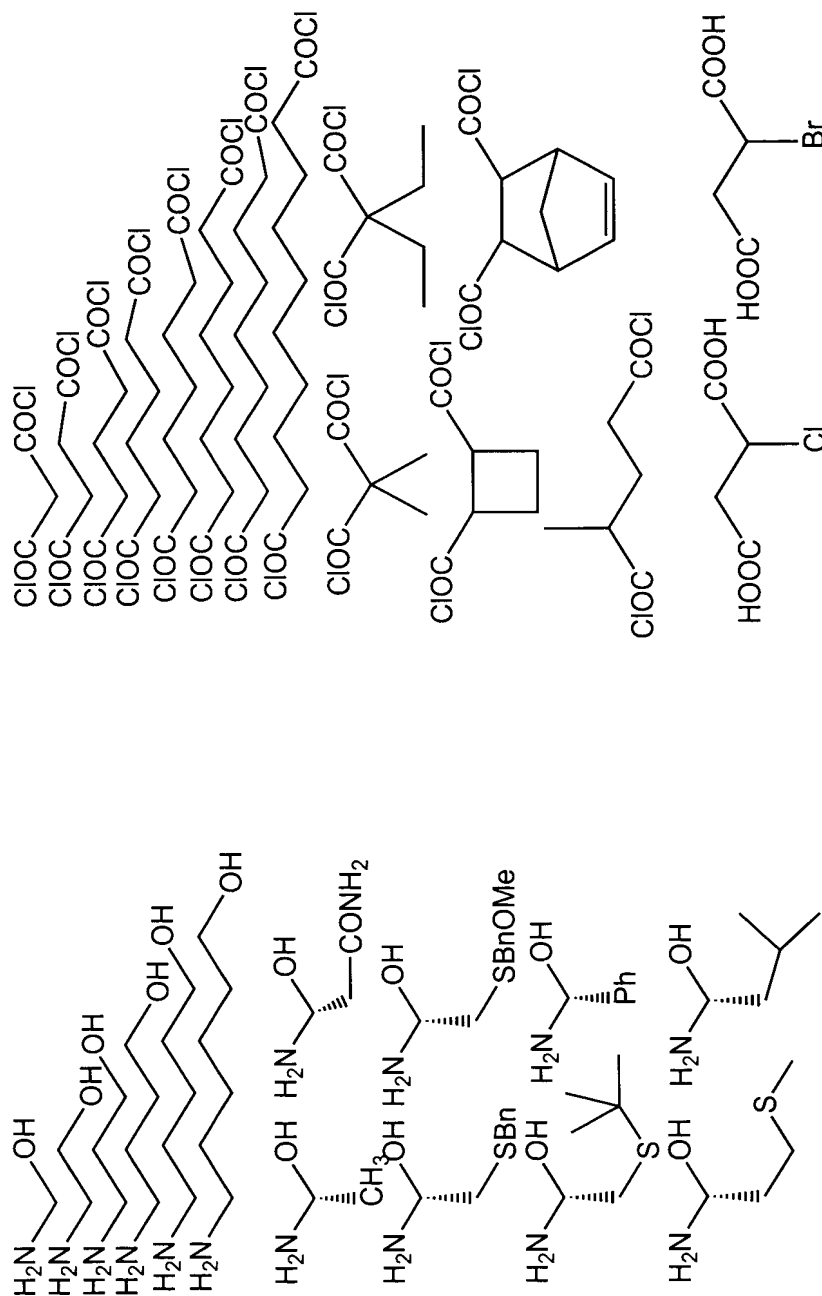
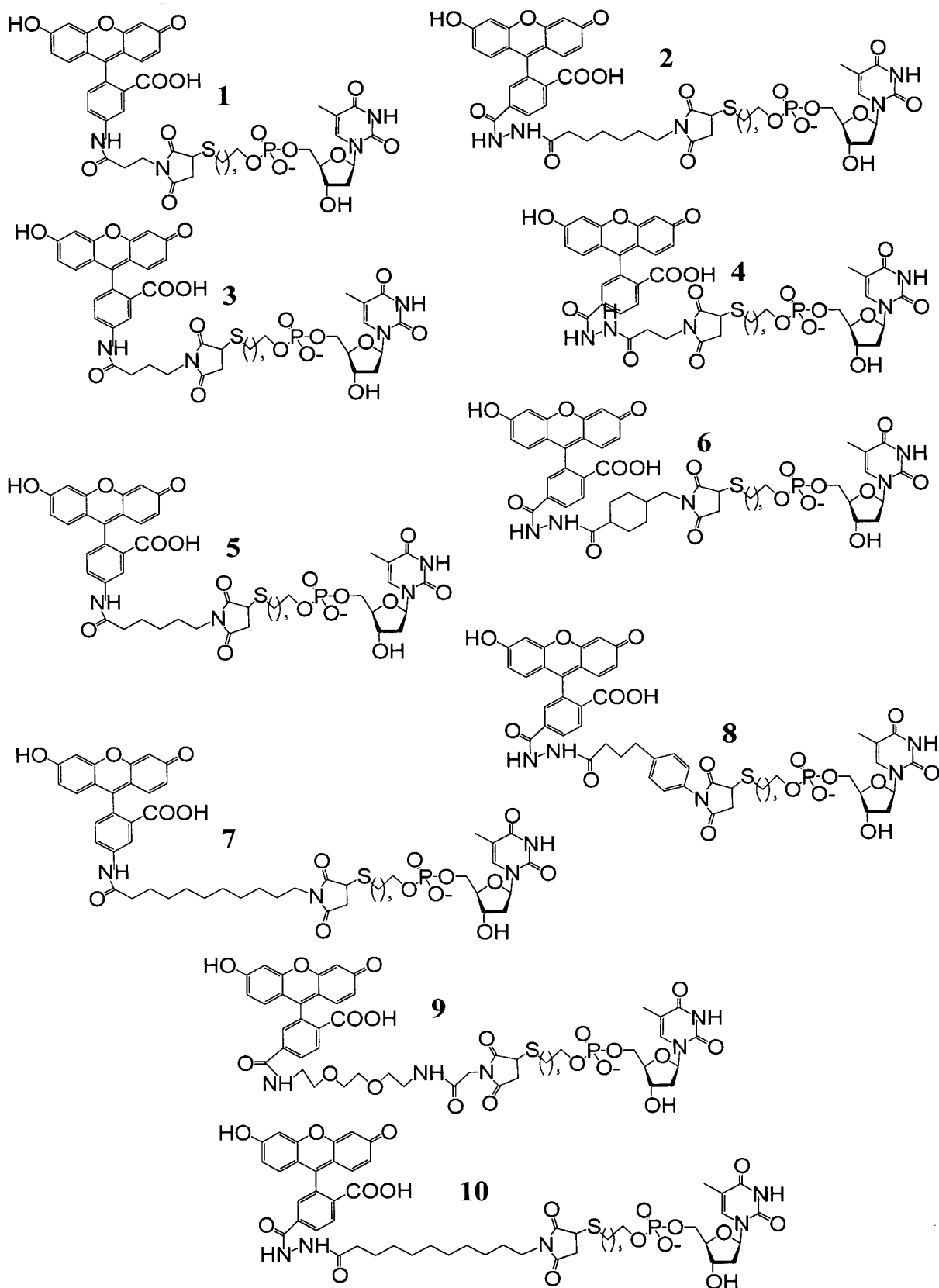


Fig. 13



**Fig. 14**



**Fig. 15**



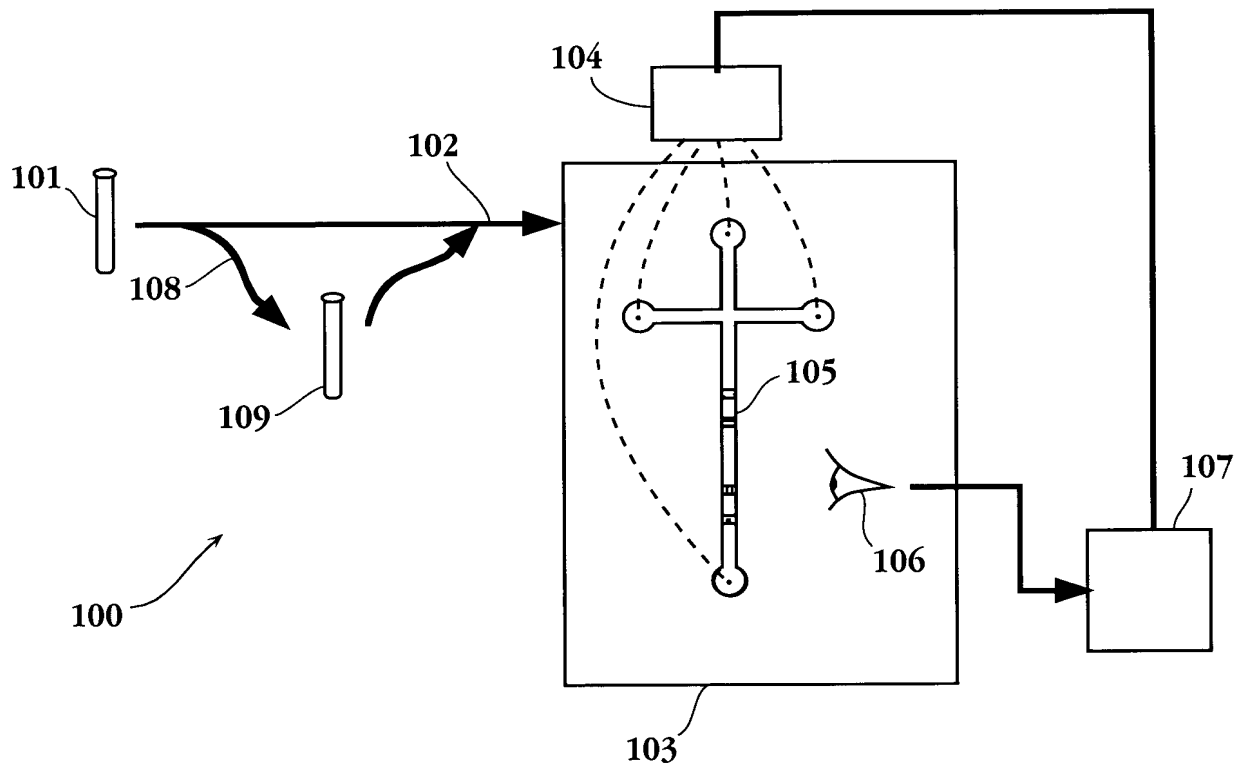
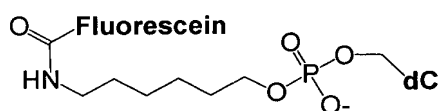
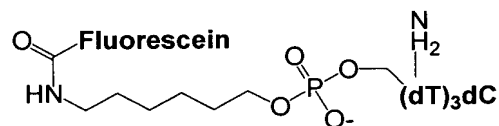


Fig. 16

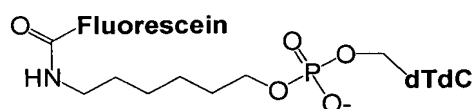
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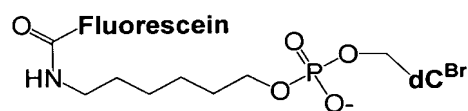
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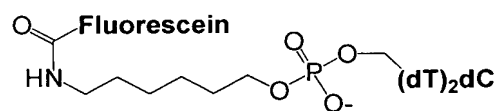
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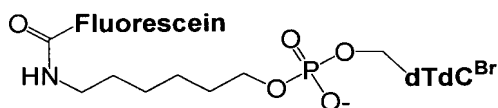
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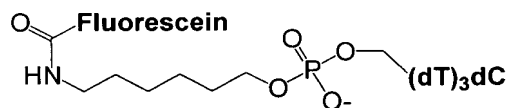
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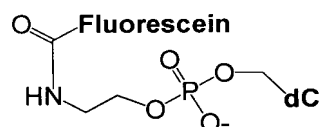
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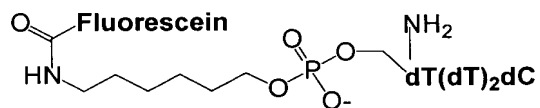
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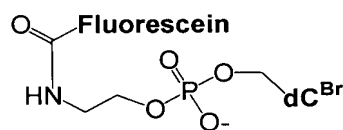
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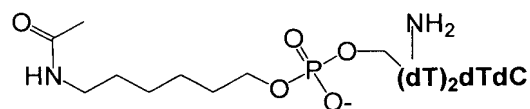
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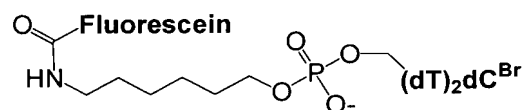
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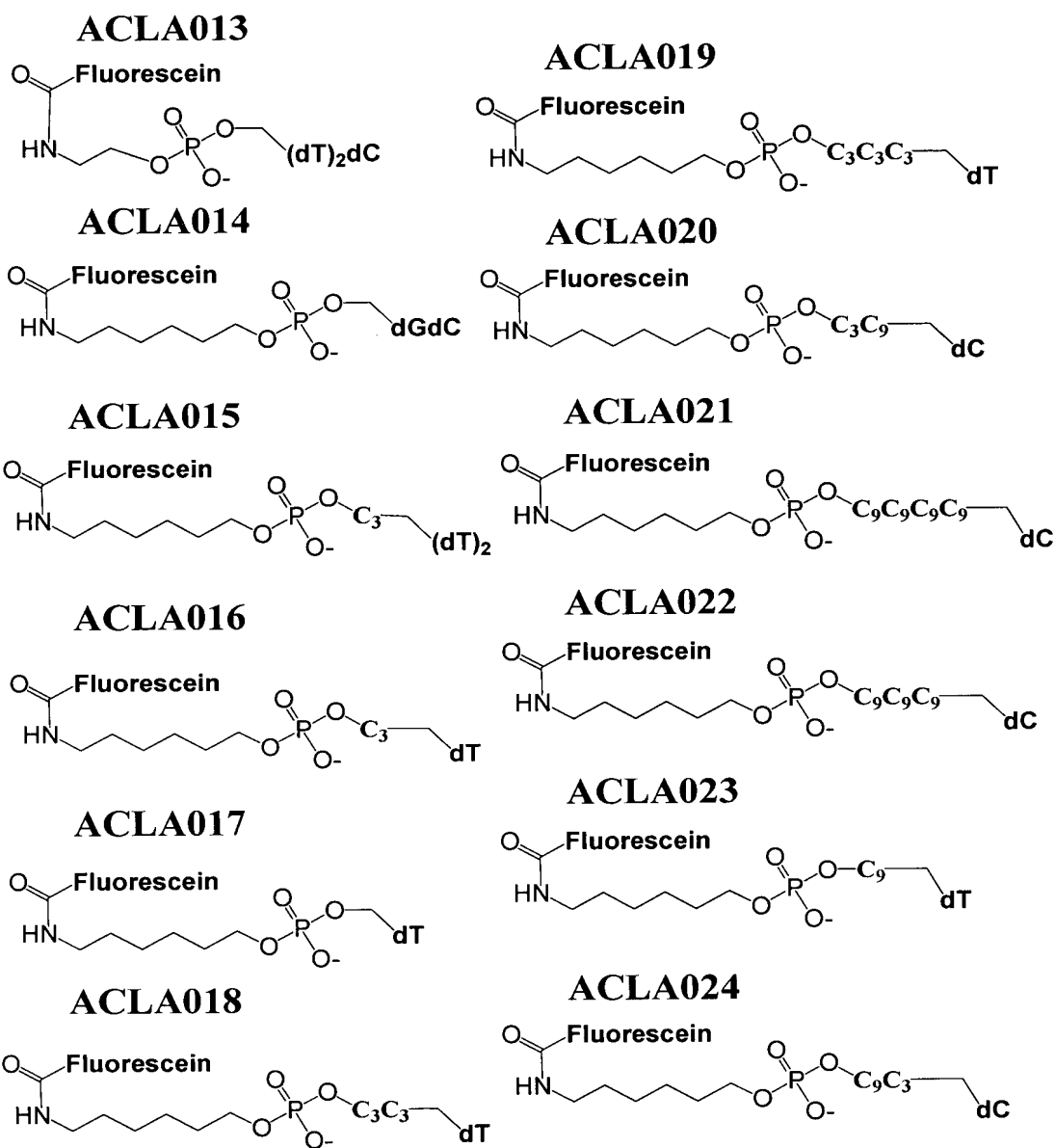
**ACLA006**



**ACLA012**



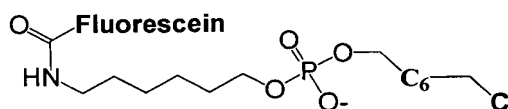
**Fig. 17A**



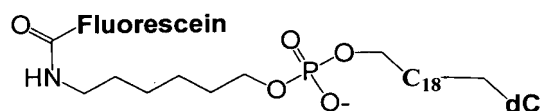
**Fig. 17B**

**Fig. 17C**

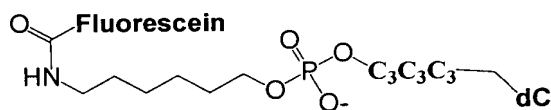
**ACLA037**



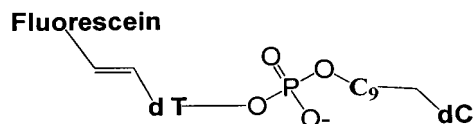
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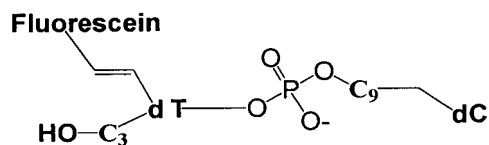
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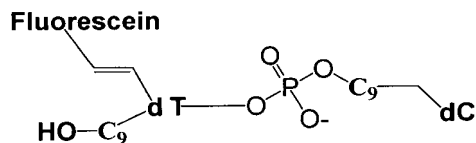
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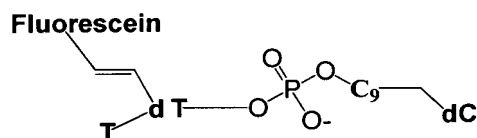
**ACLA041**



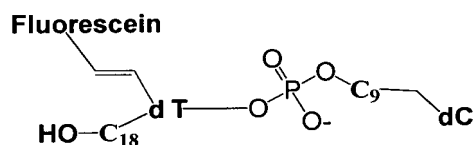
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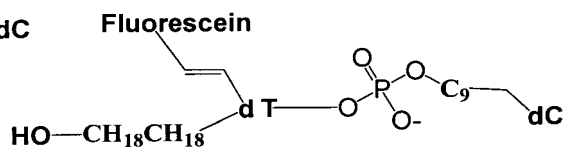
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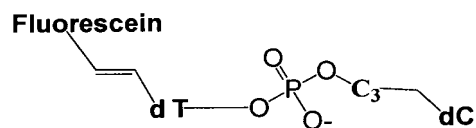
**ACLA044**



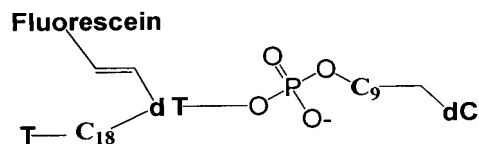
**ACLA045**



**ACLA046**

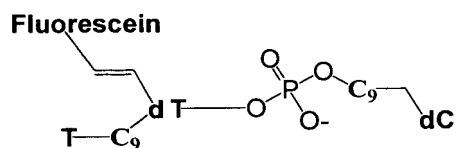


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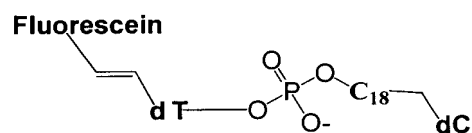


**Fig. 17D**

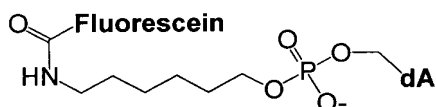
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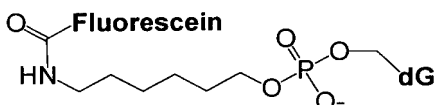
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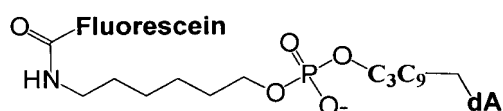
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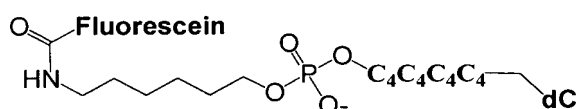
**ACLA051**



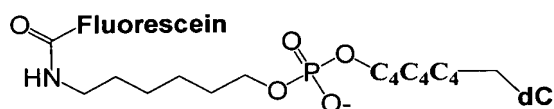
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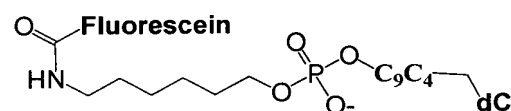
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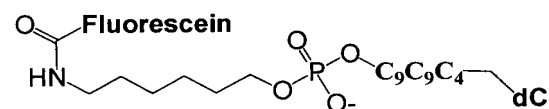
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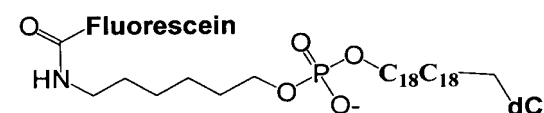
**ACLA055**



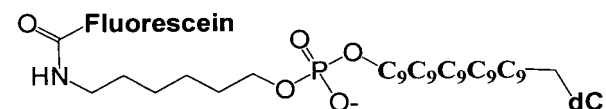
**ACLA056**



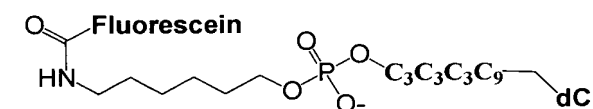
**ACLA057**



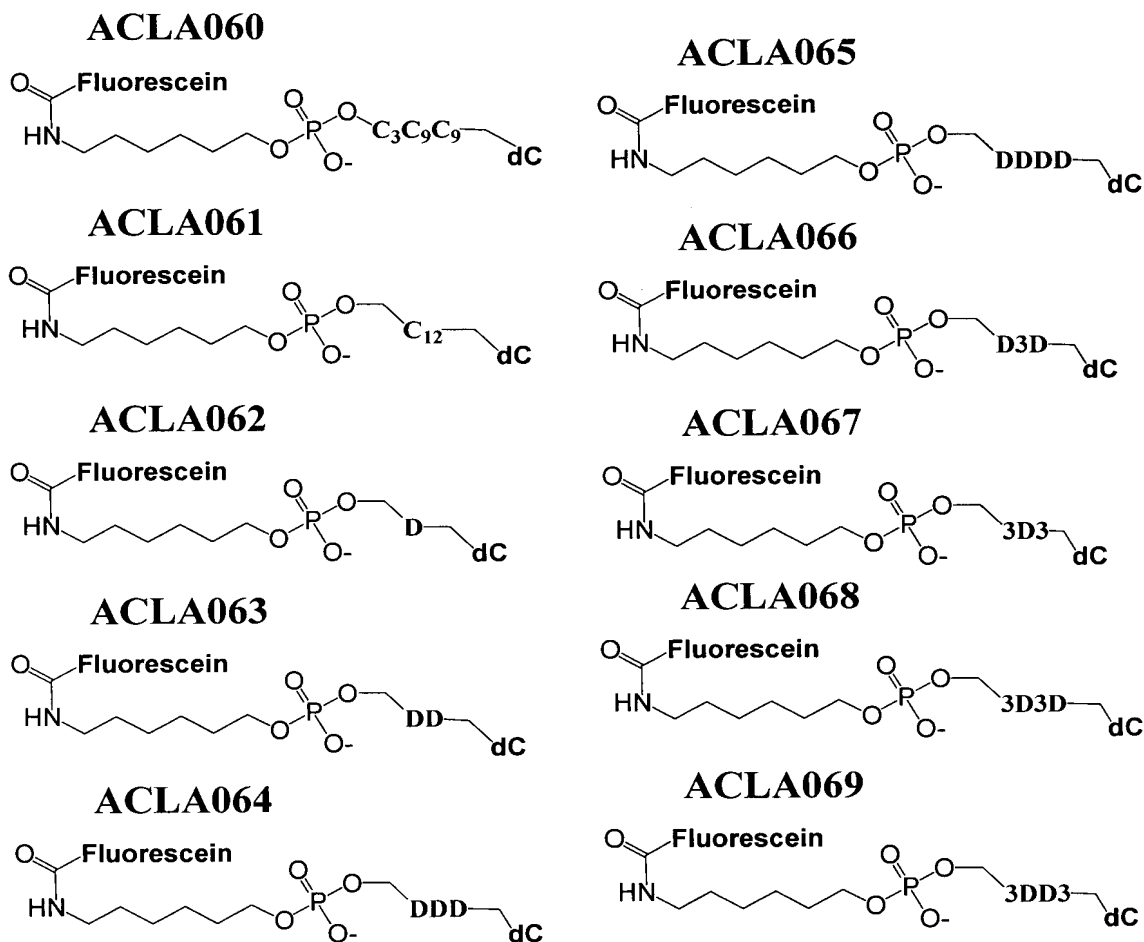
**ACLA058**



**ACLA059**

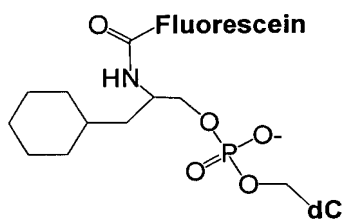


**Fig. 17E**

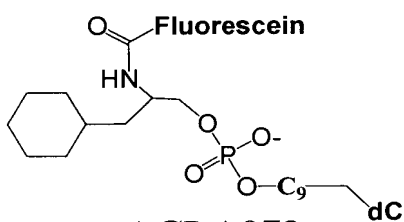


**Fig. 17F**

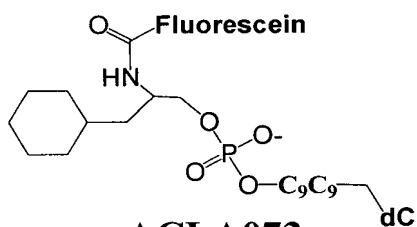
**ACLA070**



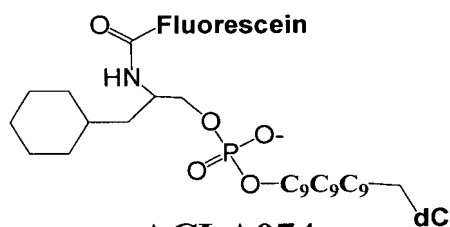
**ACLA071**



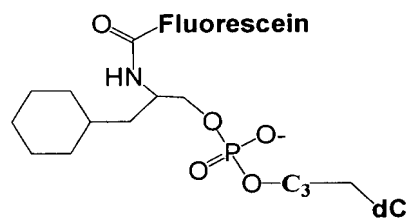
**ACLA072**



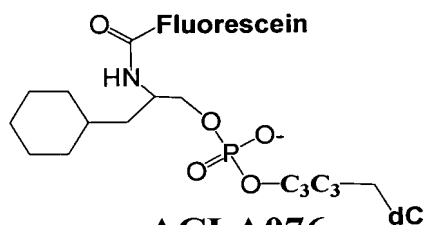
**ACLA073**



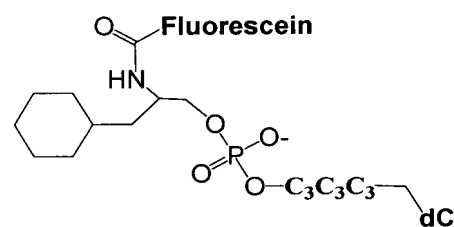
**ACLA074**



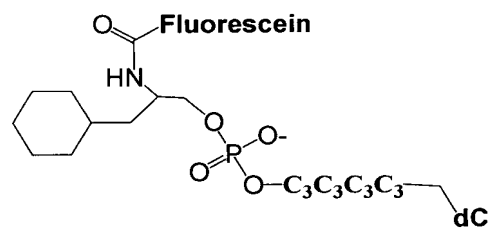
**ACLA075**



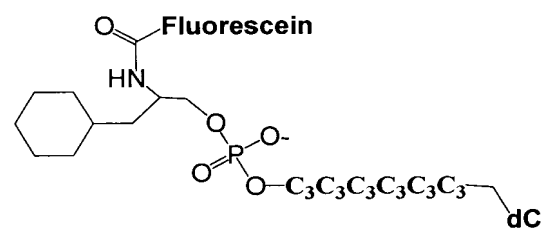
**ACLA076**



**ACLA077**



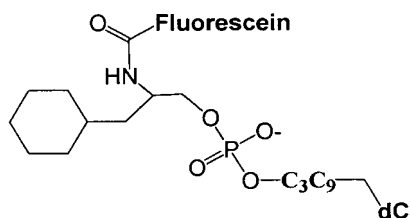
**ACLA078**



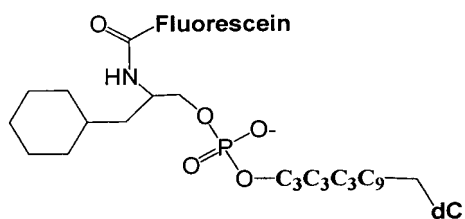
**Fig. 17G**



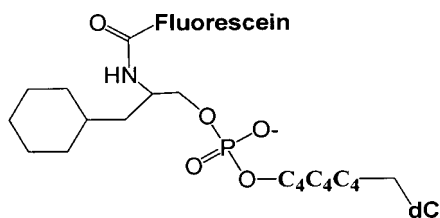
**ACLA079**



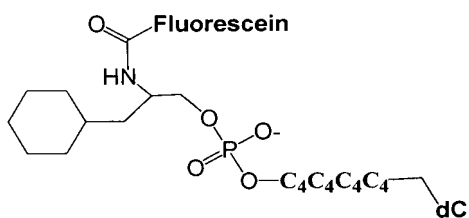
**ACLA080**



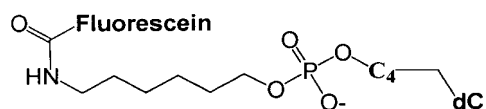
**ACLA081**



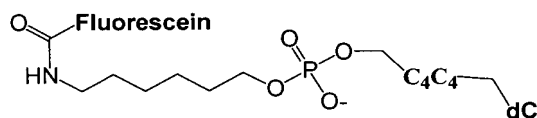
**ACLA082**



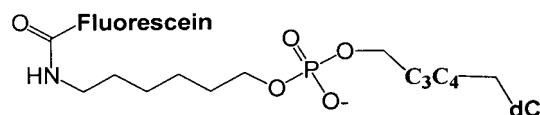
**ACLA083**



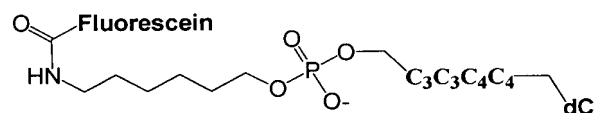
**ACLA084**



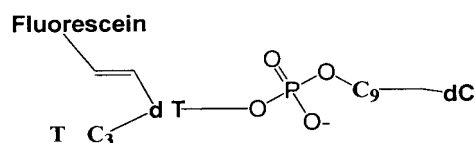
**ACLA085**



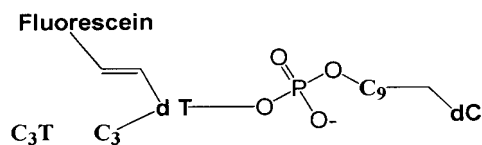
**ACLA086**



**ACLA087**

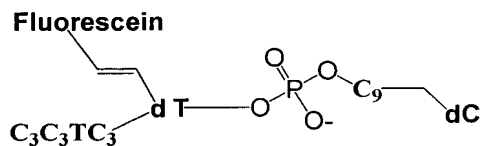


**ACLA088**

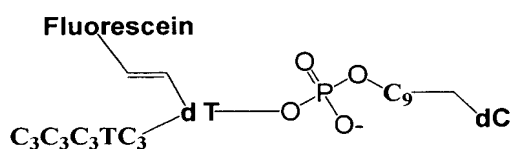


**Fig. 17H**

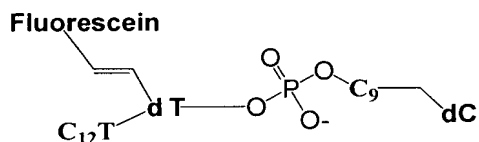
### ACLA089



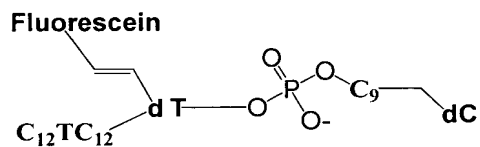
### ACLA090



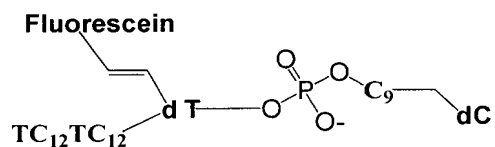
### ACLA091



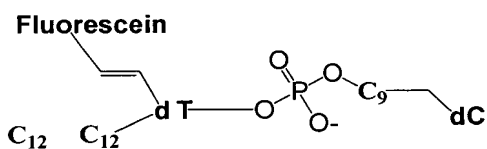
### ACLA092



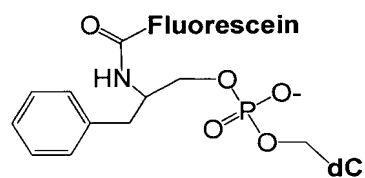
### ACLA093



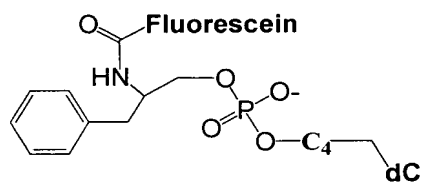
### ACLA094



### ACLA095



### ACLA096



### ACLA097

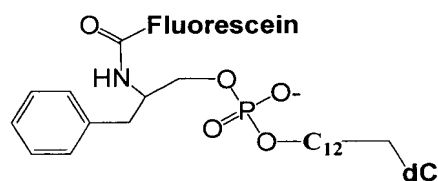
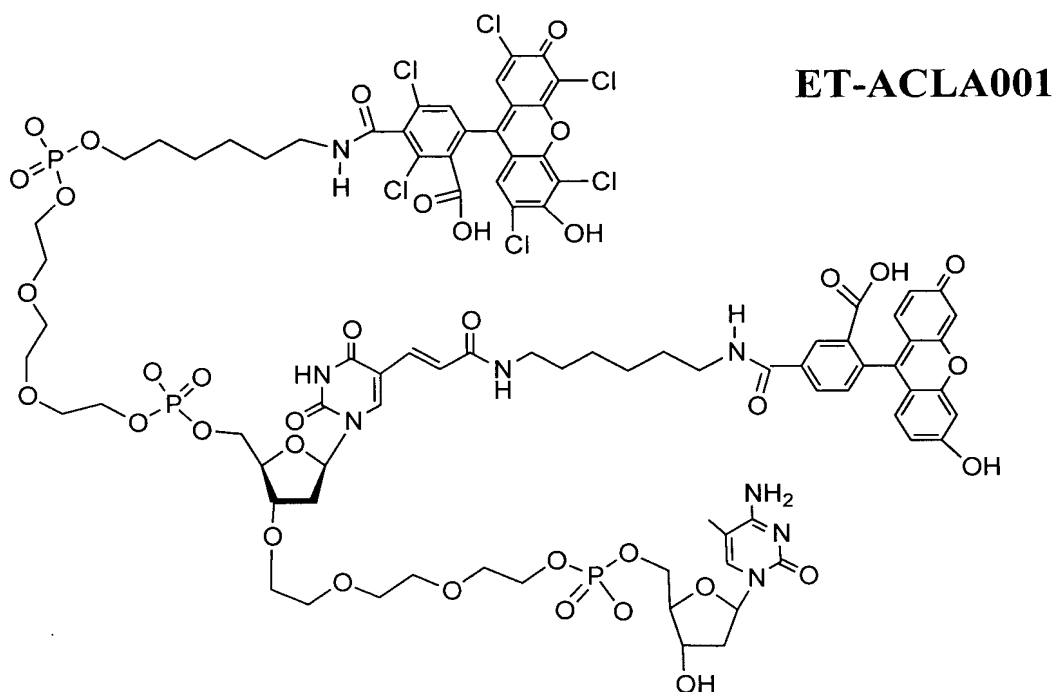
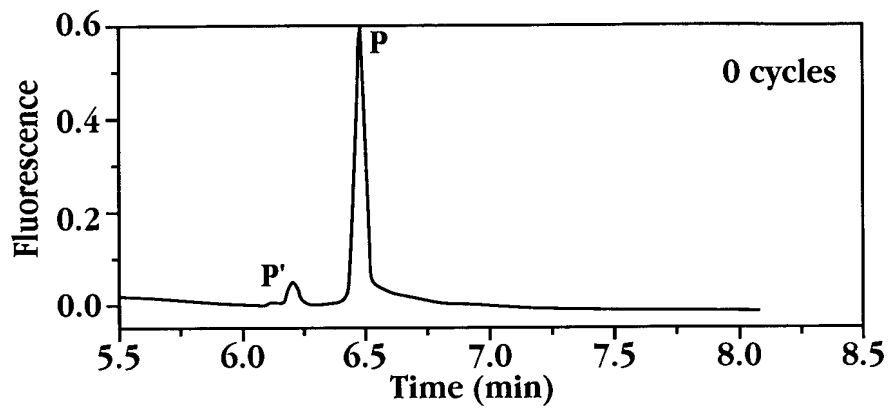


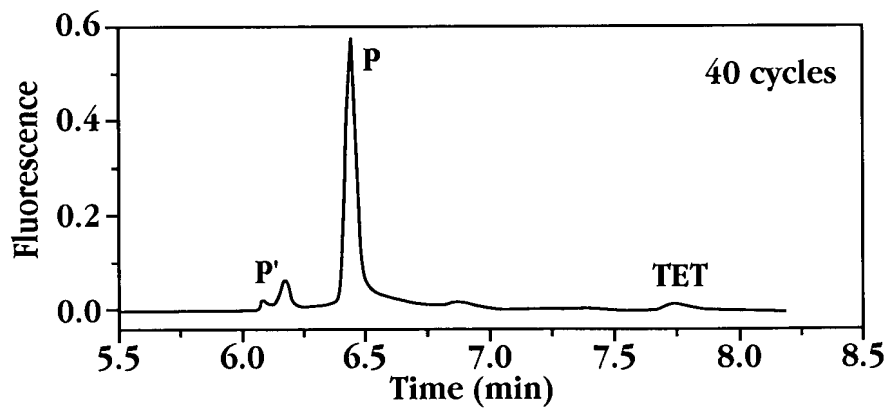
Fig. 17I



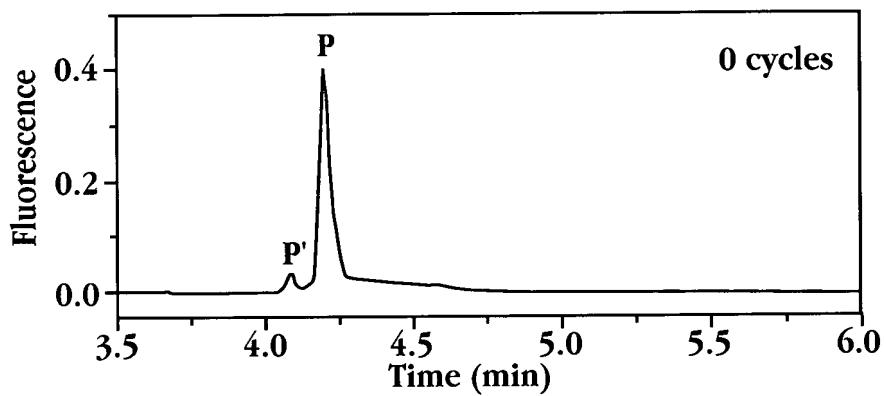
**Fig. 17J**



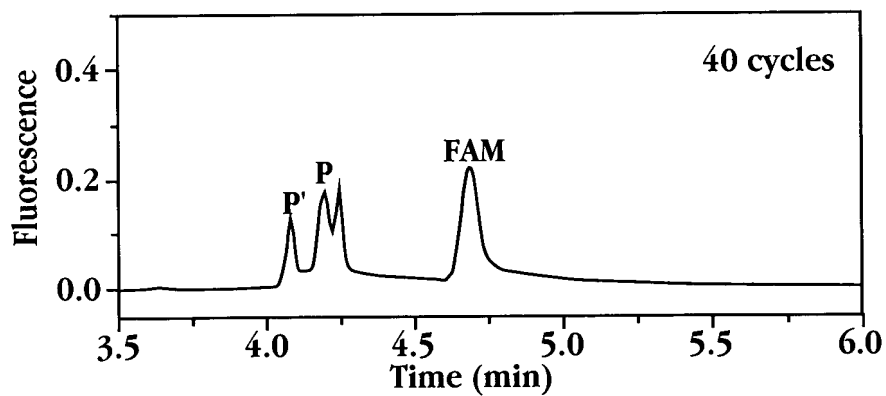
**Fig. 18A**



**Fig. 18B**

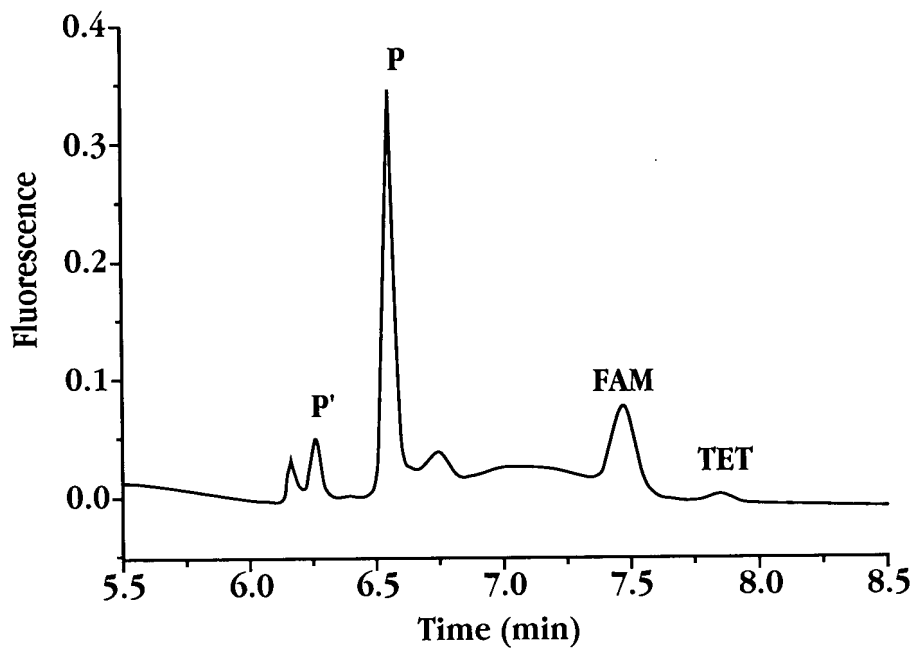


**Fig. 19A**

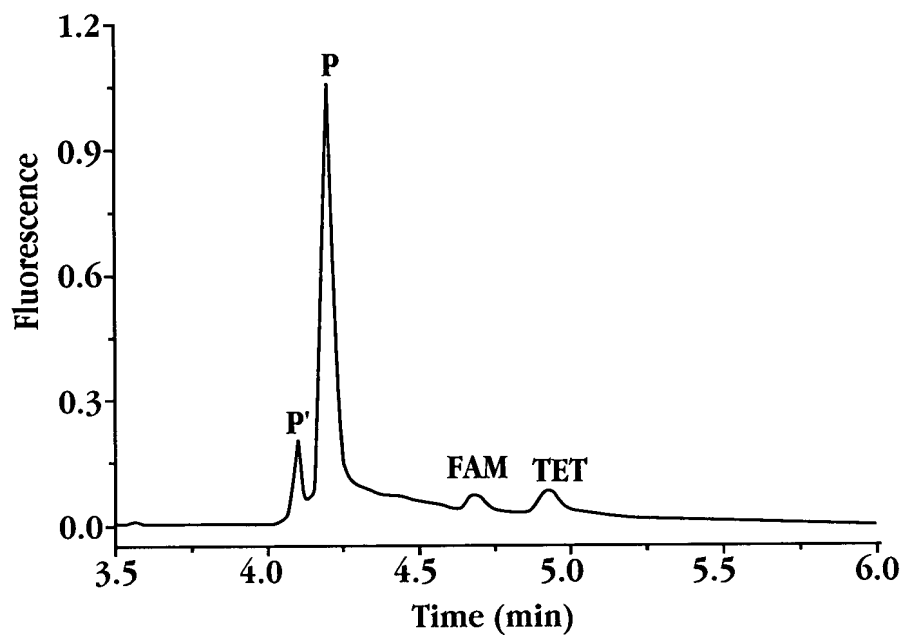


**Fig. 19B**

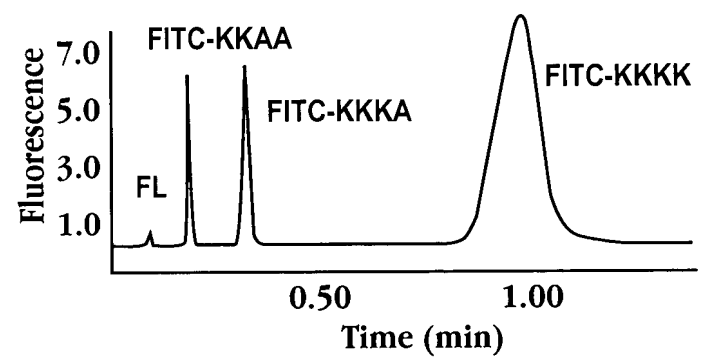
102010 " 10612363



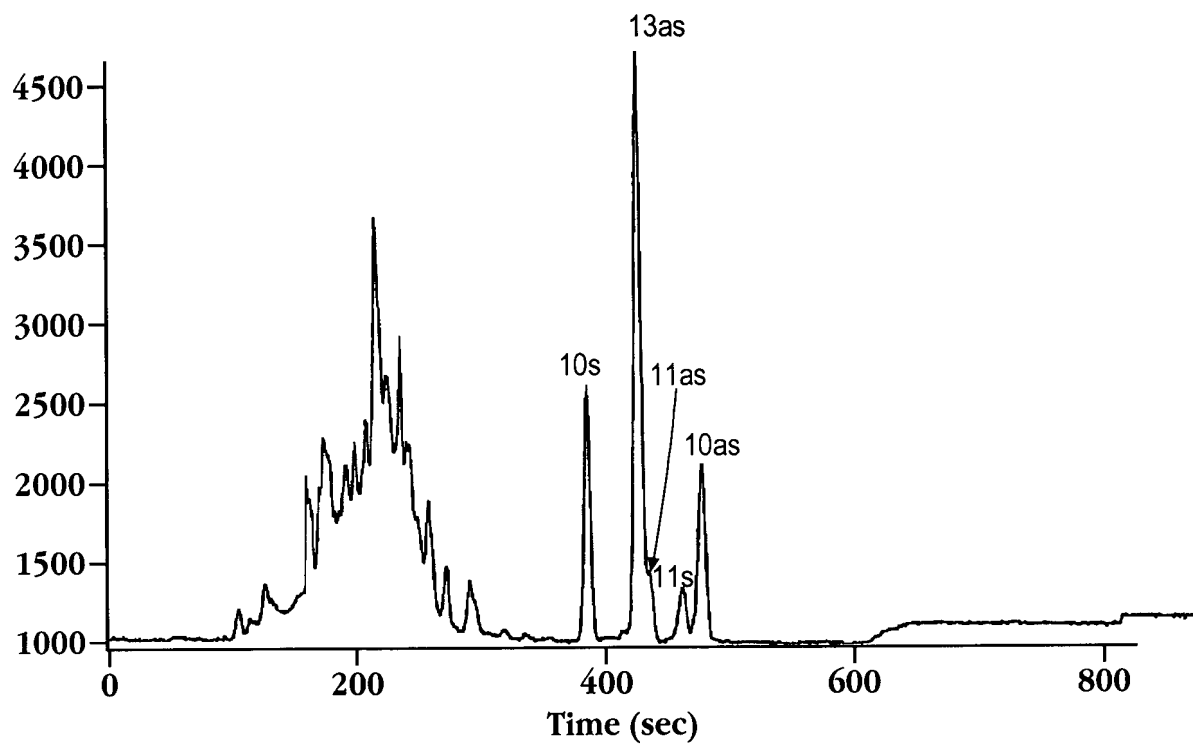
**Fig. 20**



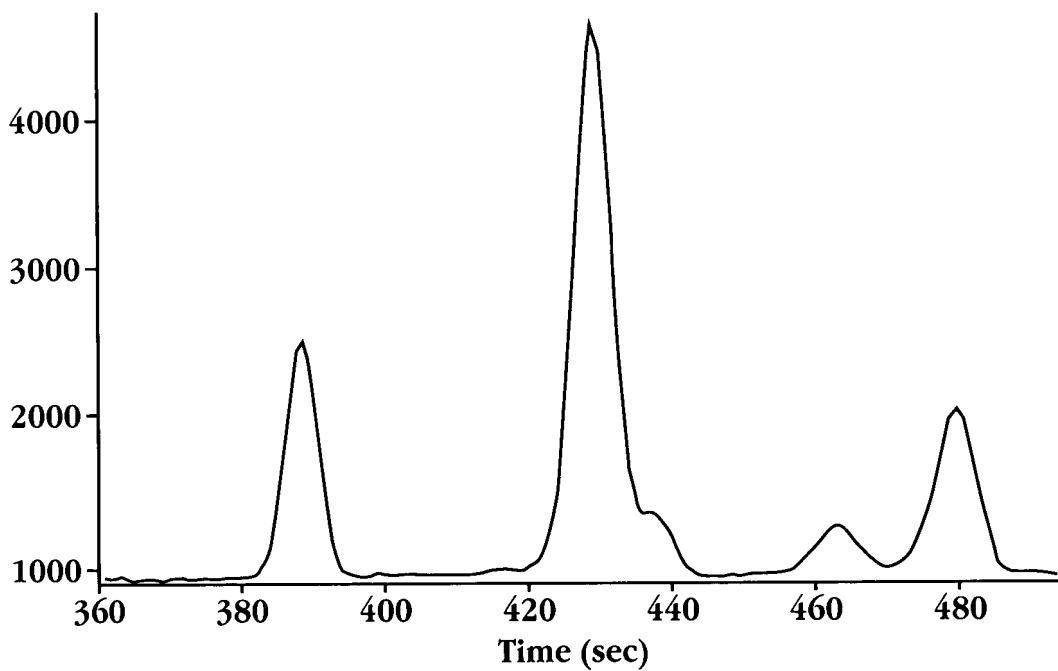
**Fig. 21**



**Fig. 22**



**Fig. 23A**



**Fig. 23B**



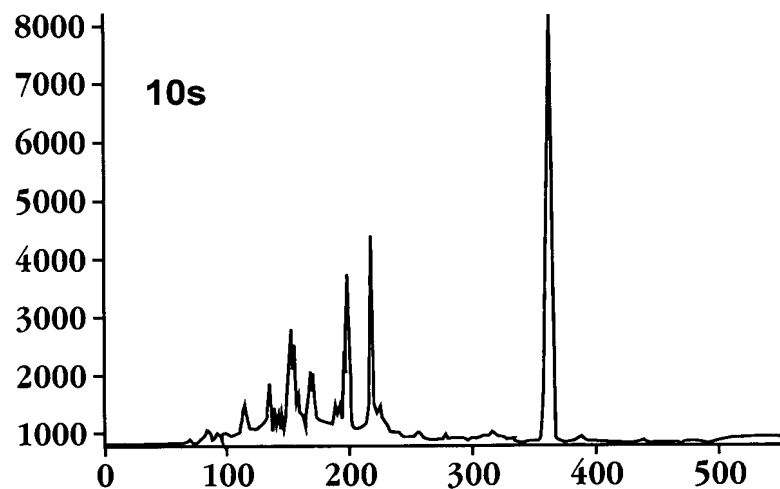


Fig. 23C

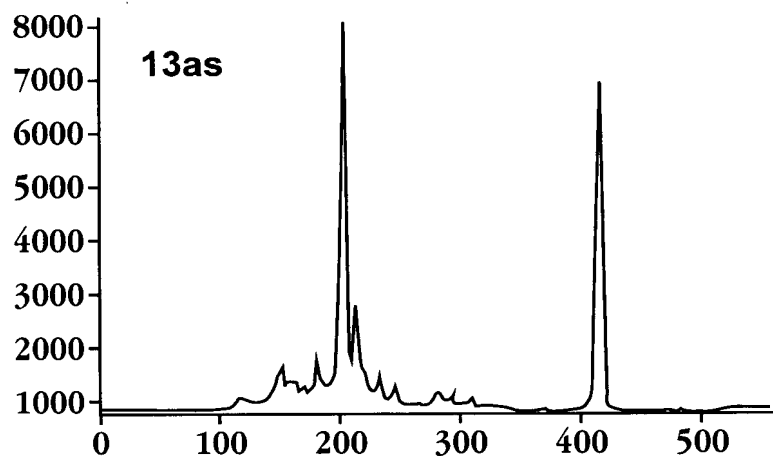


Fig. 23D

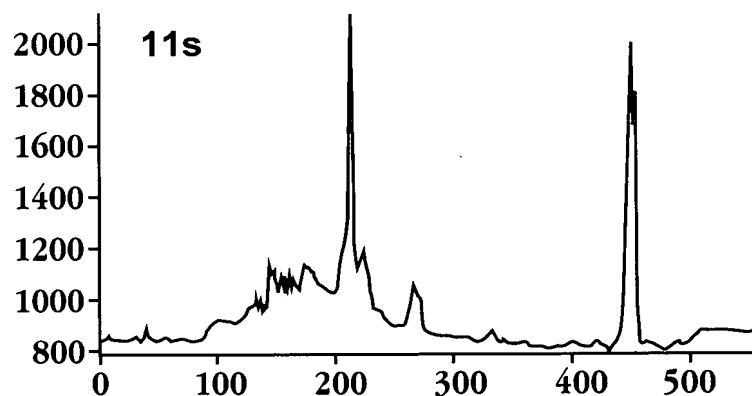
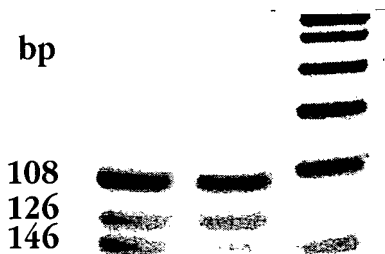
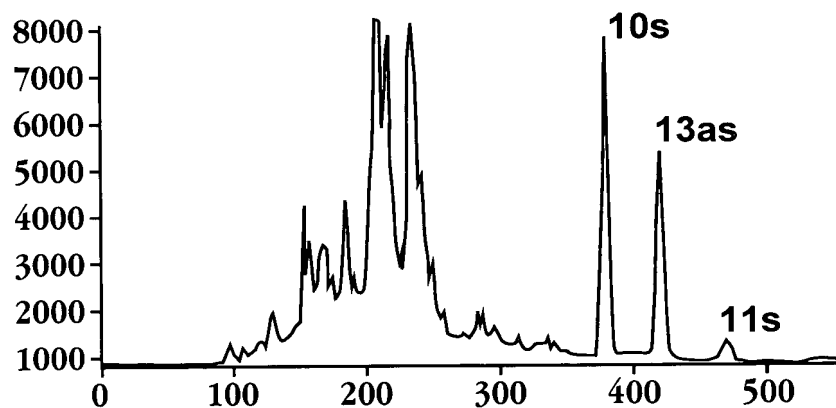


Fig. 23E



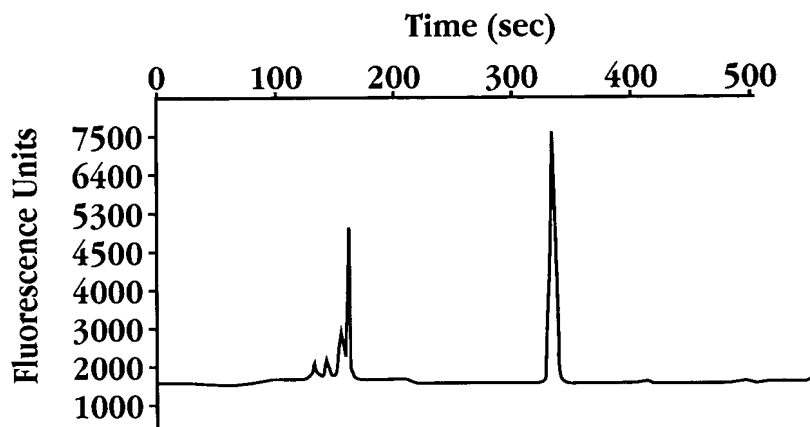
**Fig. 23F**



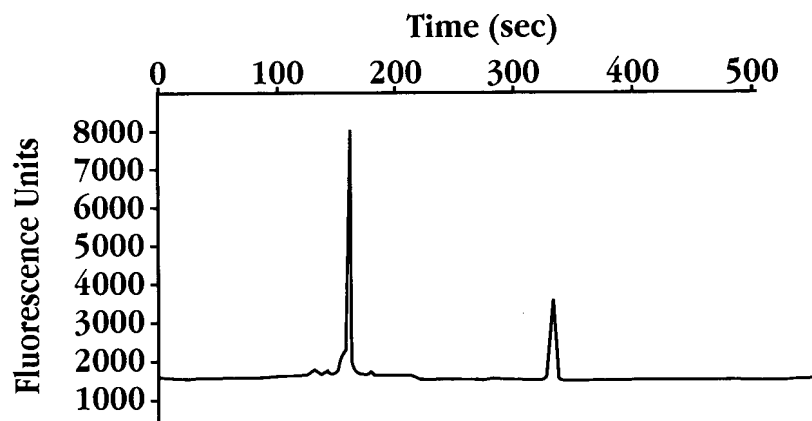
**Fig. 23G**

44113 44172 44173 44174 44175 44176 44177 44178 44179 44180 44181 44182 44183 44184 44185 44186 44187 44188 44189 44190 44191 44192 44193 44194 44195 44196 44197 44198 44199 44200 44201 44202 44203 44204 44205 44206 44207 44208 44209 44210 44211 44212 44213 44214 44215 44216 44217 44218 44219 44220 44221 44222 44223 44224 44225 44226 44227 44228 44229 44230 44231 44232 44233 44234 44235 44236 44237 44238 44239 44240 44241 44242 44243 44244 44245 44246 44247 44248 44249 44250 44251 44252 44253 44254 44255 44256 44257 44258 44259 44260 44261 44262 44263 44264 44265 44266 44267 44268 44269 44270 44271 44272 44273 44274 44275 44276 44277 44278 44279 44280 44281 44282 44283 44284 44285 44286 44287 44288 44289 44290 44291 44292 44293 44294 44295 44296 44297 44298 44299 44300 44301 44302 44303 44304 44305 44306 44307 44308 44309 44310 44311 44312 44313 44314 44315 44316 44317 44318 44319 44320 44321 44322 44323 44324 44325 44326 44327 44328 44329 44330 44331 44332 44333 44334 44335 44336 44337 44338 44339 44340 44341 44342 44343 44344 44345 44346 44347 44348 44349 44350 44351 44352 44353 44354 44355 44356 44357 44358 44359 44360 44361 44362 44363 44364 44365 44366 44367 44368 44369 44370 44371 44372 44373 44374 44375 44376 44377 44378 44379 44380 44381 44382 44383 44384 44385 44386 44387 44388 44389 44390 44391 44392 44393 44394 44395 44396 44397 44398 44399 44400 44401 44402 44403 44404 44405 44406 44407 44408 44409 44410 44411 44412 44413 44414 44415 44416 44417 44418 44419 44420 44421 44422 44423 44424 44425 44426 44427 44428 44429 44430 44431 44432 44433 44434 44435 44436 44437 44438 44439 44440 44441 44442 44443 44444 44445 44446 44447 44448 44449 44450 44451 44452 44453 44454 44455 44456 44457 44458 44459 44460 44461 44462 44463 44464 44465 44466 44467 44468 44469 44470 44471 44472 44473 44474 44475 44476 44477 44478 44479 44480 44481 44482 44483 44484 44485 44486 44487 44488 44489 44490 44491 44492 44493 44494 44495 44496 44497 44498 44499 44500 44501 44502 44503 44504 44505 44506 44507 44508 44509 44510 44511 44512 44513 44514 44515 44516 44517 44518 44519 44520 44521 44522 44523 44524 44525 44526 44527 44528 44529 44530 44531 44532 44533 44534 44535 44536 44537 44538 44539 44540 44541 44542 44543 44544 44545 44546 44547 44548 44549 44550 44551 44552 44553 44554 44555 44556 44557 44558 44559 44560 44561 44562 44563 44564 44565 44566 44567 44568 44569 44570 44571 44572 44573 44574 44575 44576 44577 44578 44579 44580 44581 44582 44583 44584 44585 44586 44587 44588 44589 44590 44591 44592 44593 44594 44595 44596 44597 44598 44599 44600 44601 44602 44603 44604 44605 44606 44607 44608 44609 44610 44611 44612 44613 44614 44615 44616 44617 44618 44619 44620 44621 44622 44623 44624 44625 44626 44627 44628 44629 44630 44631 44632 44633 44634 44635 44636 44637 44638 44639 44640 44641 44642 44643 44644 44645 44646 44647 44648 44649 44650 44651 44652 44653 44654 44655 44656 44657 44658 44659 44660 44661 44662 44663 44664 44665 44666 44667 44668 44669 44670 44671 44672 44673 44674 44675 44676 44677 44678 44679 44680 44681 44682 44683 44684 44685 44686 44687 44688 44689 44690 44691 44692 44693 44694 44695 44696 44697 44698 44699 44700 44701 44702 44703 44704 44705 44706 44707 44708 44709 44710 44711 44712 44713 44714 44715 44716 44717 44718 44719 44720 44721 44722 44723 44724 44725 44726 44727 44728 44729 44730 44731 44732 44733 44734 44735 44736 44737 44738 44739 44740 44741 44742 44743 44744 44745 44746 44747 44748 44749 44750 44751 44752 44753 44754 44755 44756 44757 44758 44759 44760 44761 44762 44763 44764 44765 44766 44767 44768 44769 44770 44771 44772 44773 44774 44775 44776 44777 44778 44779 44780 44781 44782 44783 44784 44785 44786 44787 44788 44789 44790 44791 44792 44793 44794 44795 44796 44797 44798 44799 44800 44801 44802 44803 44804 44805 44806 44807 44808 44809 44810 44811 44812 44813 44814 44815 44816 44817 44818 44819 44820 44821 44822 44823 44824 44825 44826 44827 44828 44829 44830 44831 44832 44833 44834 44835 44836 44837 44838 44839 44840 44841 44842 44843 44844 44845 44846 44847 44848 44849 44850 44851 44852

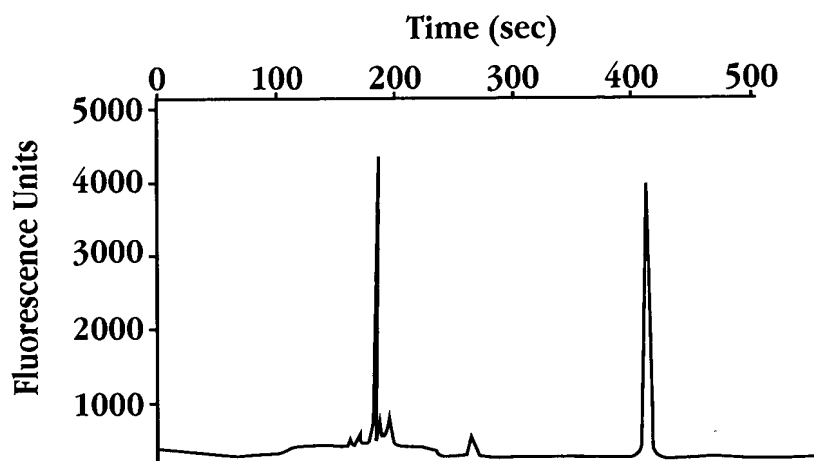
**Fig. 24**



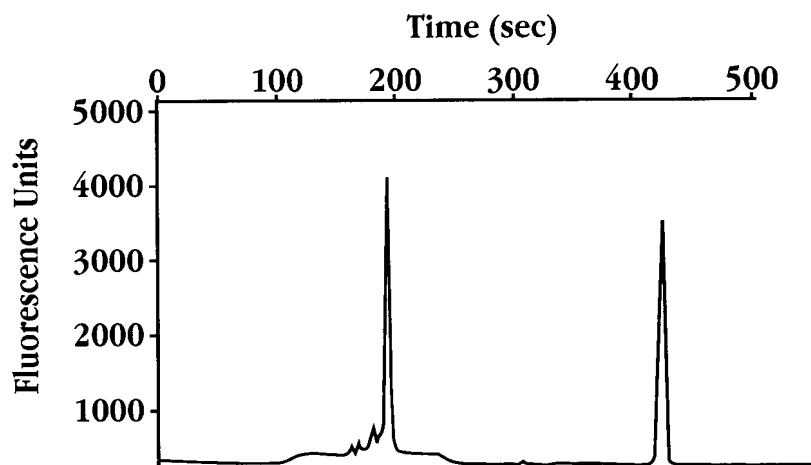
**Fig. 25A**



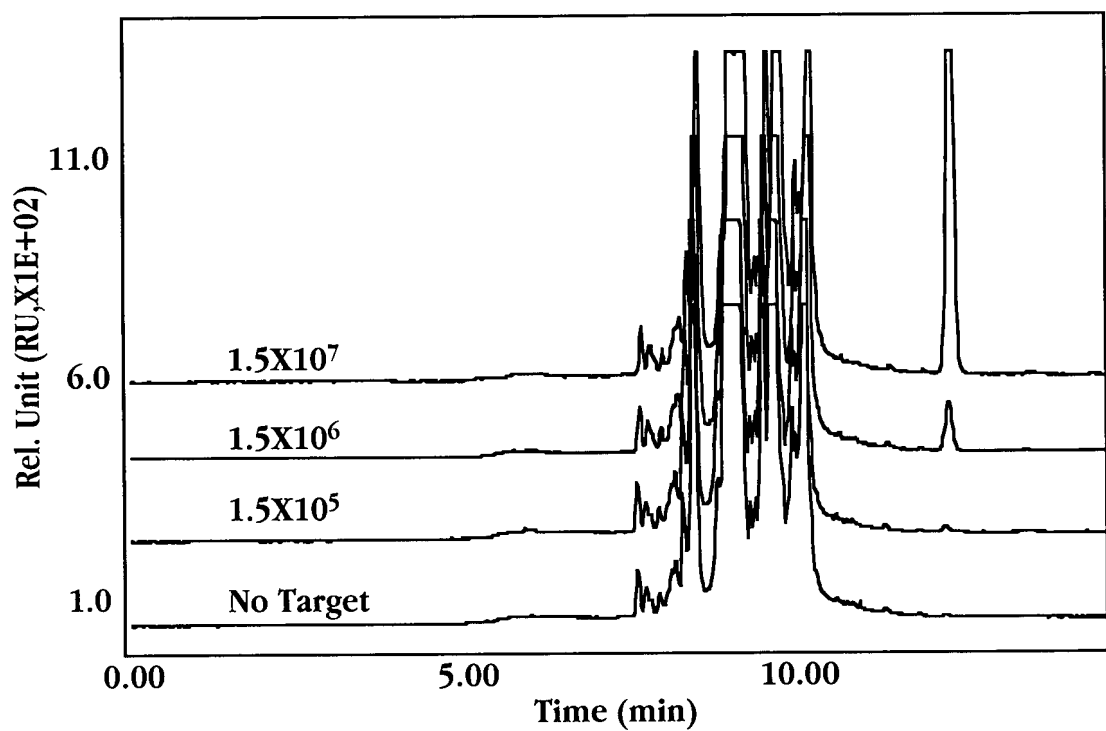
**Fig. 25B**



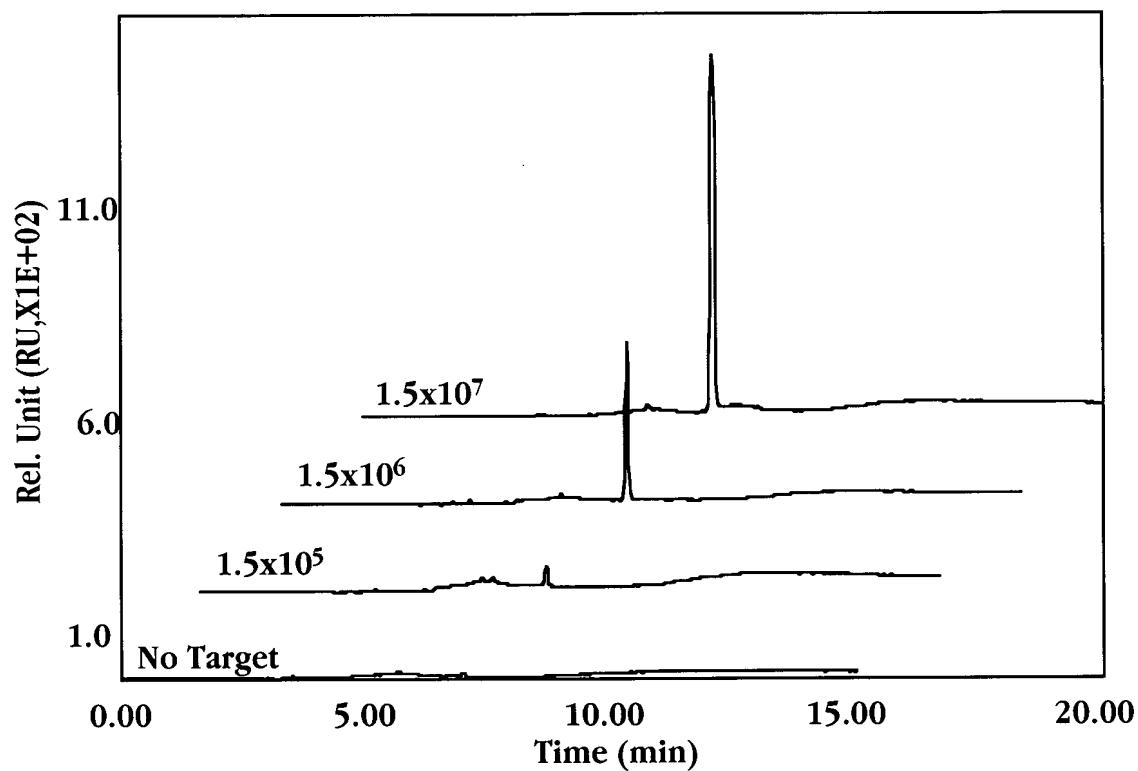
**Fig. 25C**



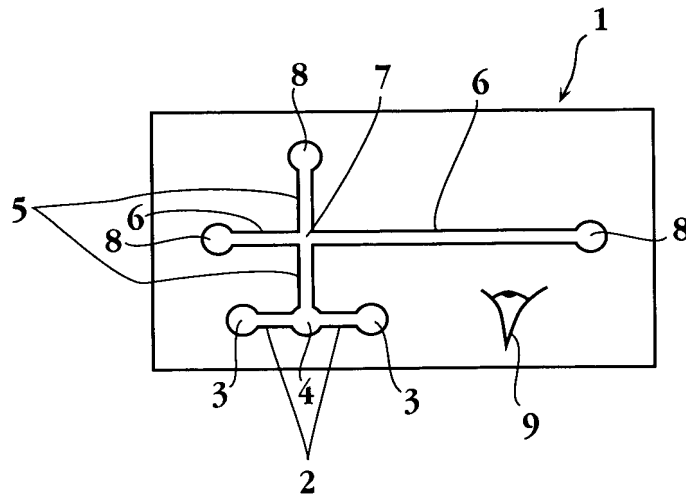
**Fig. 25D**



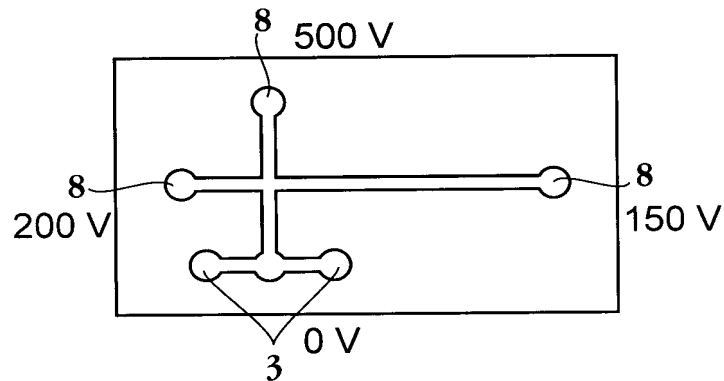
**Fig. 26**



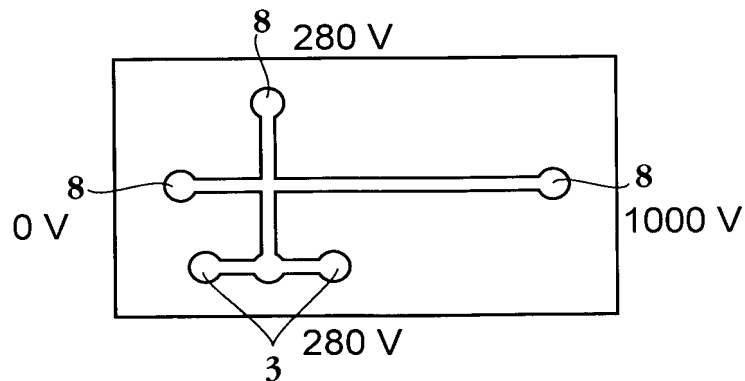
**Fig. 27**



**Fig. 28A**



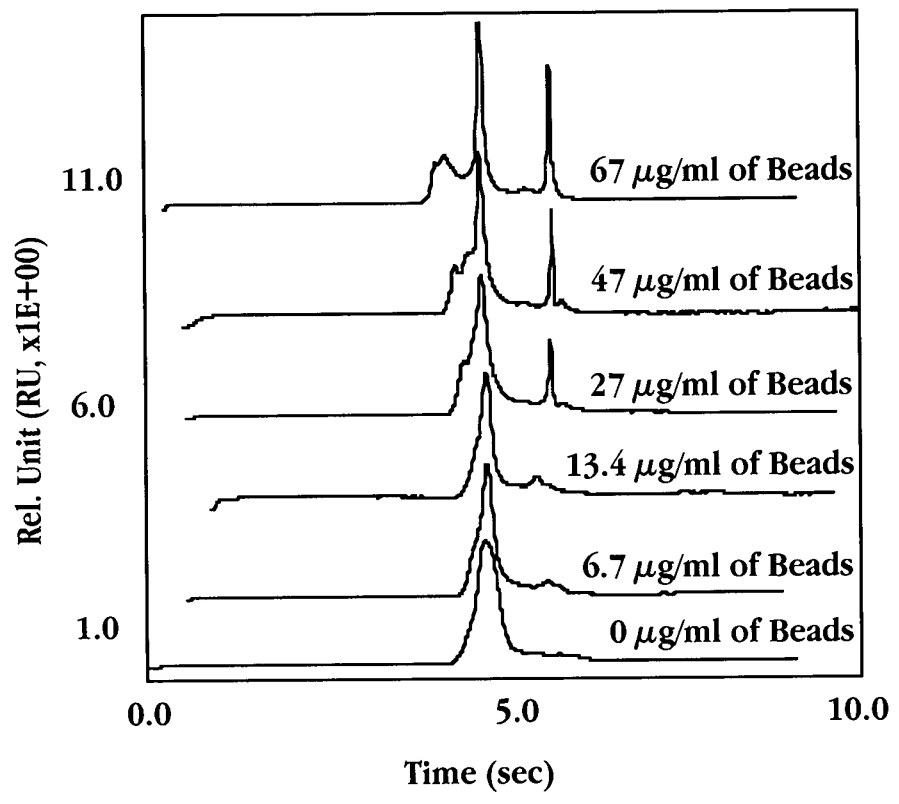
**Fig. 28B**



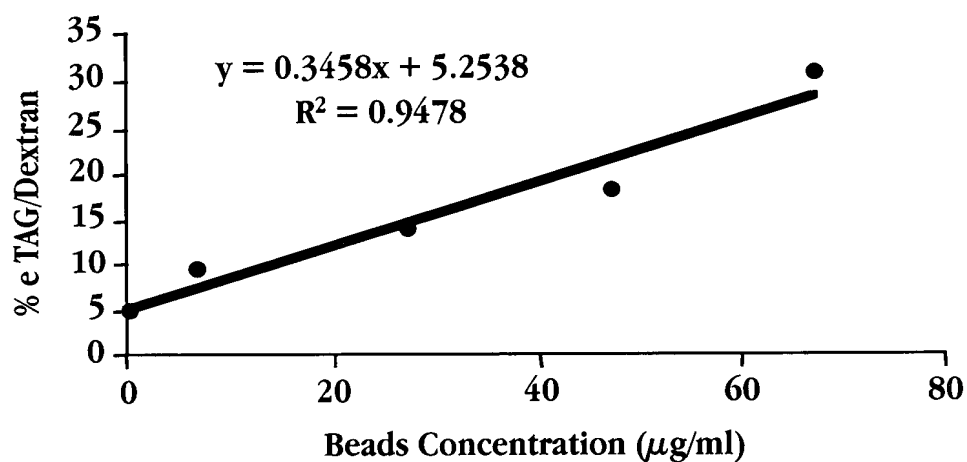
**Fig. 28C**



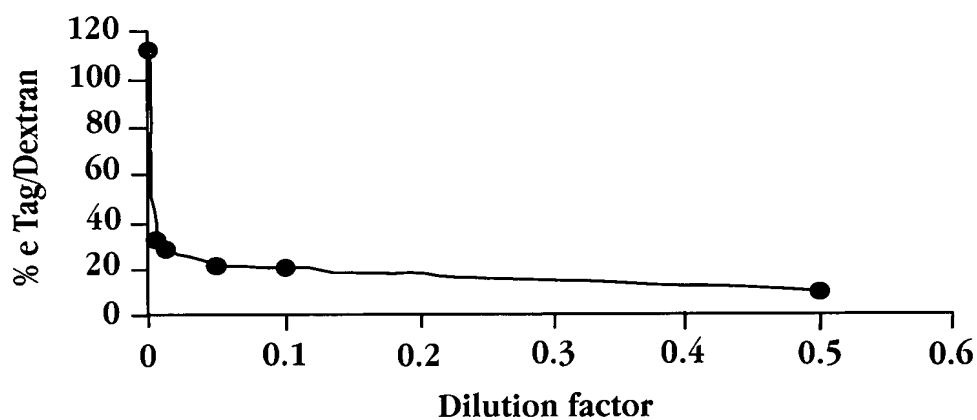
**Fig. 29**



**Fig. 30**



**Fig. 31**



**Fig. 32**

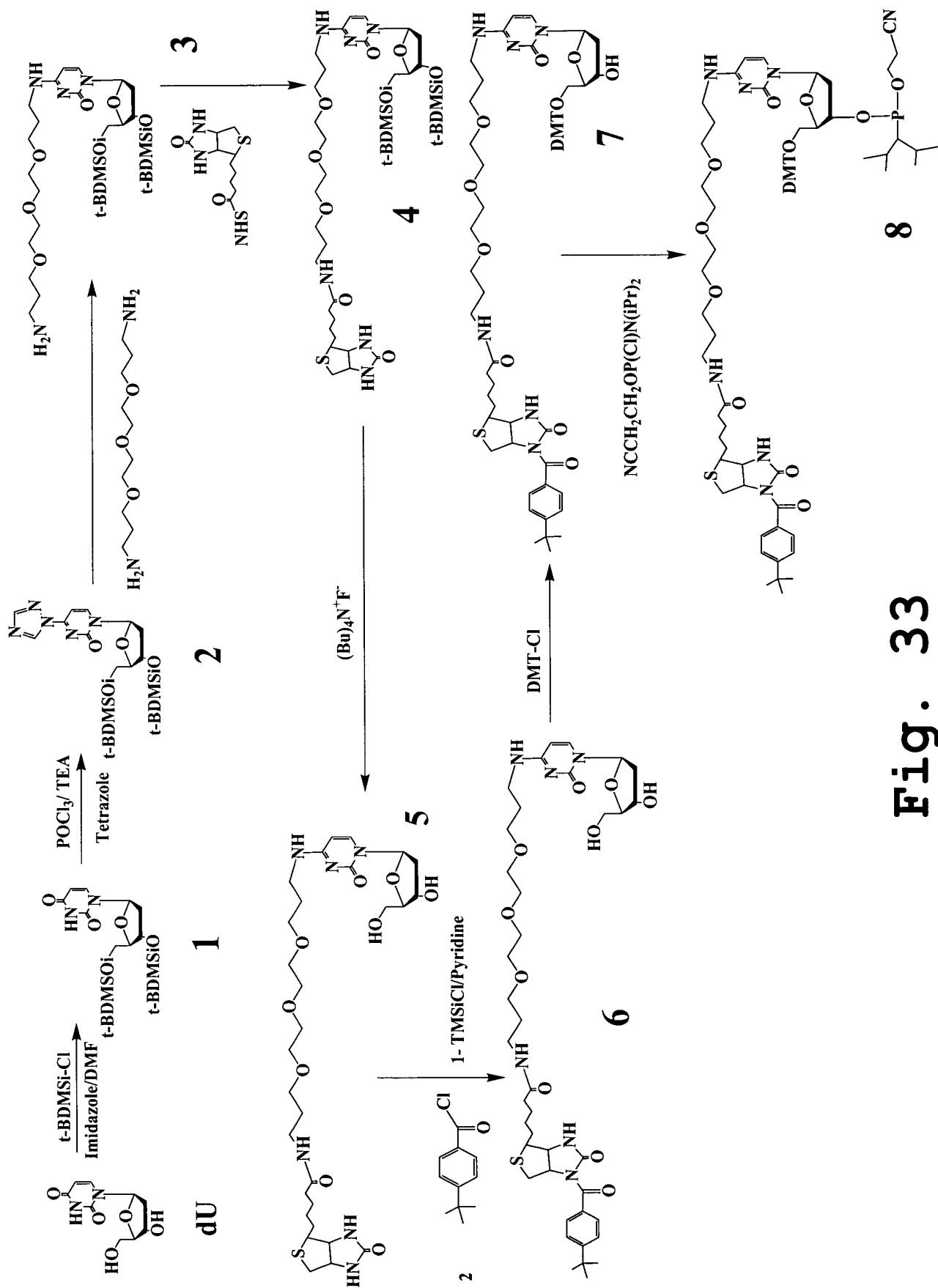


Fig. 33

